

CATALYST COMPOSITIONS FOR PRODUCING POLYOLEFINS
IN THE ABSENCE OF COCATALYSTS

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ABSTRACT

10 This invention relates to the field of olefin polymerization catalyst compositions, and methods for the polymerization and copolymerization of olefins, including polymerization methods using a supported catalyst composition. One aspect of this invention is the preparation and use of a catalyst composition comprising a hydrocarbyl-substituted metallocene compound and a chemically-treated solid oxide for olefin polymerization processes. In another aspect, for example, this
15 invention encompasses the preparation of a catalyst composition comprising (η -5-cycloalkadienyl)₂Zr(hydrocarbyl)₂ complexes and sulfated alumina, but containing no organoaluminum or organoboron cocatalysts, and further the use of this catalyst composition for polymerizing olefins.

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